EXHIBIT W

CONDITIONS OF APPROVAL FOR "PLAN OF OPERATIONS"
Replaces Forest Service Evaluation of Plan of Operations FS 2800-5 VI and Terms and Conditions FS 2800-5 VIII

Claim Name(s): Big Seam
Red Ink Maid

Operator: Richard Sykora or his designatee

CAMC #(s):29686
29687

Address: P.O. Box 622
Foresthill, CA 95631

1. OPERATIONS

a.) Extent or scope of this project will not exceed the proposed operation as described. Any unapproved deviation from the proposal may be construed as unlawful, and the United States Forest Service may take appropriate legal action.

b.) Periodic progress assessments of your mining and mining related activities will be made to ascertain adherence to approved operations, per 36CFR228.7.

c.) This authorization is for underground exploration using the below listed equipment. Any mining operations or associated activities other than specified are not approved herein.

d.) Surface equipment used for your operation will be limited to:

One (1) Generator
One (1) Air compressor
Two (2) Fuel Tank
One (1) Storage Locker and associated tools

e.) Any equipment brought in from other than the project area, must be washed before being transported to and from the site to avoid the spread of noxious weeds.

f.) If designated cast (waste) area (as identified by the RWQCB Waste Discharge Permit) fails to accommodate the excavated material at the authorized waste dump area, the excavation activity must stop.

g.) Unused and/or unusable equipment and materials not actively being used for this mining operation may not be stored on National Forest System lands without prior written authorization.

h.) This authorization shall be kept at the work site and made available to any Forest Officer or Law Enforcement Officer or other Government official upon request.

i.) Appendix A of these Conditions of Approval contain Mitigation Measures that are also terms and conditions of, and part of, this authorization.

2. FIRE

a.) State and Federal fire laws and regulations apply to your activities in accordance with 36 CFR §228.11 and Public Resource Codes (PRC). The operator will adhere to the attached Fire Prevention Sections 1,2 and 3.

b.) Contact the local California Department of Forestry and/or a local Forest Service Ranger Station for additional and/or current information.

c.) Discharging of explosives on National Forest lands will require a blasting permit from the Forest Service. Transporting, storage and discharge of explosives must be in accordance with all applicable Federal, State and Local laws and regulations, including but not limited to: Placer County Sheriff Office, and the National Explosive Licensing Center (404-417-2750)

d.) All fire restrictions apply to these operations unless specifically exempted by the authorizing officer in writing. It is the claimants responsibility to request exemption.

3. FUEL and HAZARDOUS MATERIALS

a.) The operator shall provide the Forest Service with copies of all other Federal, State and local agency permits which include required stipulations and conditions relating to hazardous substances, their proper transportation, storage, use, disposal and/or consumption on National Forest lands.

b.) Storage of hazardous materials not addressed below is not allowed unless each individual product is specifically authorized. The operator shall submit information regarding hazardous material to be used in the operation, including transportation, storage, use/generation and disposal of each individual product. This includes providing to the Forest Service the MSDS of hazardous materials used at the mine site, or in advance of transport on National Forest roads.

c.) Only fuel, oil and petrochemicals used to keep external combustions equipment operational and lubricated are authorized to be stored on National Forest System lands for the Big Seam/Red Ink Maid Project. All storage containers of these products must be kept within in an adequate sized covered impervious basin out of the flood plain to prevent contamination of soil and water resources. All hazardous waste products must be properly identified and labeled and disposed of in accordance with State and County Environmental Heath regulations. All hazardous waste materials including oil, hydraulic fluids, antifreeze, batteries and other discarded contaminants must be removed from National Forest System lands, sealed in approved containers and taken to an approved oil disposal facility or other authorized disposal facilities. Containers for small quantities of fuel such as 5 gallon gas cans or less must meet Type I & II safety codes and be UL listed.

d.) The mine operator shall have absorbent socks and pillows with capacity to absorb the quantity of fuel, hydraulic fluid or lubricants stored on site, including what is in the equipment fuel tanks and fluid reservoirs.

4. COMPLIANCE with LAWS, REGULATIONS, and other LEGAL REQUIREMENTS

a.) The operator shall comply with all applicable Federal, State, and local laws, regulations, and standards, including but not limited to, the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., the Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq., the Comprehensive Environmental Response, Control, and Liability Act, 42 U.S. C. 9601 et seq., and other relevant environmental laws, as well as public health and safety laws and other laws relating to the siting, construction, operation, and maintenance of any facility, improvement, or equipment on the property.

b.) Native American and Historic Era (over 50 years old) sites, features and artifacts must be protected until such a time as they can be reviewed, recorded and possibly evaluated by qualified Forest Service personnel. This includes historic mining sites, townsites, cabins, trash scatters, mining equipment, ditches and other artifacts and features over 50 years old. Native American sites may include grinding stones grinding rocks, arrowheads, flakes, et cetera. In accordance with the National Historic Preservation Act of 1966, the Antiquities Act of 1906, and the Archaeological Protection Act of 1979 as amended, disturbing, altering or removing sites, features and/or artifacts from National Forest System lands is illegal and punishable by fines up to $10,000.00 and/or imprisonment. Should an archaeological or historic era site, feature or artifact be discovered, work shall stop. The Forest Service must be immediately notified and the area protected from any disturbance until reviewed by qualified Forest Service personnel.

c.) Endangered, threatened, and proposed species are protected under the Endangered Species Act of 1973, as amended. It is illegal to take federally listed species and their habitat, except where an exemption has been granted under the Act (50 CFR 451) or when the U. S. Fish and Wildlife Service has permitted an incidental taking (50 CFR 402.14(i)). Forest Service Sensitive plants and animals may also require special protection measures. To ensure that your operations comply with all laws and regulations, should you discover the presence of any endangered, threatened, proposed, or sensitive species, cease work in the area of discovery, and report it immediately to the Forest Service.

5. STRUCTURES

a.) No structures of any sort may be used, repaired, constructed, or placed upon National Forest System lands without prior specific written authorization.

b.) The Forest Service will not be responsible for any liability concerning mine structures or other improvements.

6. SANITATION

a.) County public health and safety requirements shall be complied with. Human waste disposal systems (other than self-contained units dumped at legal disposal sites) must be certified by the County Sanitarian.

b.) Solid waste and trash must be removed from National Forest System lands and disposed of in an approved manner at least once every seven (7) days.(36CFR228.8(c).

7. VEGETATION

a.) Vegetation slash will be used for reclamation and erosion control as specified in the attached Mitigation Measures. Live and cut vegetation may not be covered by mining waste material, except for as provided in #12 of the mitigation measures for Waste Dump 5.

8. ROADS and TRAILS

a.) No road, trail, bridge, landing area for aircraft, or the like, shall be constructed or improved, nor shall any other means of access, including, but not limited to, off-road vehicles, be used until you have received approval and acquired any necessary road use or special use permits.

b.) The existing road maintenance schedule and the estimated 640 feet of new road construction must follow the enclosed Appendix A.

c.) Encroachments upon any County or State roadway must be authorized by the County or State Transportation Department.

d.) Prior to any snow removal activities on Forest System roads, the proper permits must be obtained from the authorized officer.

e.) Any gates restricting access to any National Forest System land shall be specifically approved prior to their installation. A key for access through the gate shall be supplied to the Forest Service for administration purposes. Unapproved gates will be removed or destroyed by the Forest Service and the person responsible for their placement cited under 36 CFR 261.12(d).

9. WATER QUALITY

a.) All mining and mining related operations shall comply with applicable Federal and State water quality standards, including regulations issued pursuant to the Federal Water Pollution Control Act, as ammended. Provide this office with a copy of your Storm Water Pollution Prevention Plan as soon as it is approved by the Regional Water Quality Control Board.

b.) Soil loss from the site must not occur. The terms and conditions of any Storm Water Prevention Plan, National Pollutant Discharge Elimination Permit System or Waste Discharge Requirement Permit, will become part of this authorization upon issuance. Provide this office with a copy of your National Pollutant Discharge Elimination Permit, or any waste discharge requirements.

c.) The attached mitigation measures contain erosion control measures that minimize sediment generated by mining and related operations that generate sediment and erosion from entering watercourses. The claimant/operater shall monitor effectiveness of erosion control measures and make effective improvements in a timely manner.

d.) The attached mitigation measures describe winter stabilization and erosion control measures must be in place by September 15, of each year. A joint inspection between the Forest Service and the operator will be made to determine the winterization needs prior to implementation.

10. RECLAMATION

a.) Site cleanup/Reclamation work must be completed prior to the termination date of this authorization, unless reauthorization is requested prior to expiration. All personal property, equipment, structures, trash and debris must be removed from National Forest System lands. All hazards to public safety must be secured and the area returned to its natural state, as required by 36CFR228.8(g) and 36CFR228.10. Failure to complete the required work may result in the Forest Service completing the necessary items utilizing the posted performance bond funds and/or billing the operator for the costs.

b.) It has been determined that a monitoring plan must be developed to measure the changes, success and/or failure, of these mitigation measures to specific surface resources in the existing portal and access road areas, and on the new access road and new waste dump areas. The plan will identify benchmarks for achievement of reclamation goals and establish specific criteria for partial or full release of any performance bond.

c.) This authorization may not be implemented until all permits, and/or authorizations required by law or regulation from other Federal, State or local agencies are acquired and/or complied with and any required bond accepted.

d.) Upon abandonment of a mine, the owner or operator shall effectively close or fence off all surface openings which persons could fall into or through which persons could enter. Upon or near all such safeguards, trespass warnings and appropriate danger notices shall be posted. 30CFR57.20021.

e.) The Reclamation Plan is an attached document.

11. BONDING

a.) A performance/reclamation bond of $ (to be determined in a separate document by October 31, 2004) is required as a condition of this approval to the Plan of Operations. This bond must be maintained in good standing until the project is terminated and all restoration/reclamation work is completed to the satisfaction of the United States Forest Service. The penal sum of this Bond may increase if annual progress assessments indicate that your operations have exceeded those mining and mining related activities approved herein. The value of this Bond will be

reviewed for adequacy annually, and the required amount allocated may need to be adjusted if the cost associations reflected in the attached Bond Calculation Sheet change or if the on-the-ground conditions warrant cost adjustments.

b.) A copy of the bond calculation is enclosed. This bond is subject to: Title 36 CFR §228.8(g), which requires all reclamation to be completed within 1 year of the conclusion of operations, unless a longer time is allowed by the authorized officer ; Title 36 CFR 228.10(a),(b) and (c), which includes that a statement shall be filed every year in the event operations are not reactivated.

c.) This bond must be in place prior to commencing any surface disturbing activities as presented in your Plan of Operations.

12. APPEAL RIGHTS

a.) Any operator aggrieved by this decision in connection with the 36 CFR 228 regulations may file with the Forest Supervisor, Tahoe National Forest, 631 Coyote Street, Nevada City, CA 95959-2250, a written statement setting forth in detail the respects in which the decision complained of is contrary to, or in conflict with, the facts, the Law, or the regulations of the Secretary, or is otherwise in error. No such appeal will be considered unless it is filed within forty five (45) days of the date on the notice of the decision being appealed. Such appeals are under the provisions of 36 CFR 251, Subpart C.

13. SIGNATURE

a.) Approval of this operating plan does not constitute, now or in the future, recognition or certification of the validity of any mining claim to which it may relate or to the mineral character of the land on which it lies or the ownership by any person named as owner herein.

THIS AUTHORIZATION EXPIRES DECEMBER 1, 2009 AND IS NOT TRANSFERABLE.

I, THE UNDERSIGNED, CERTIFY THAT I HAVE READ, UNDERSTAND AND WILL ABIDE BY ALL THE ABOVE REQUIREMENTS, AND CONDITIONS OF THIS AUTHORIZATION.

ACCEPTED: _____, OPERATOR DATE: 9/16/04

APPROVED: _____, DISTRICT RANGER DATE: 9/20/04

Fire Prevention and Mining Operations

Excerpts From State And Federal Laws

(For full and current text, meaning and proper context of laws and regulations, reference shall be made to the applicable codes, manuals, directives, etc.)

PREVENTION AND FIRE CONTROL: Operator shall comply with all applicable Federal and State fire laws and regulations and shall take all reasonable measures to prevent and suppress fires on the area of operations and shall require his employees, contractors and subcontractors to do likewise. (36 CFR §228.11)

(PRC) Public Resource Code
(H&SC) Health and Safety Code
(CCR) California Code of Regulations
(CFR) Code of Federal Regulations

Section 1

CAMPFIRES

1. A campfire permit is required in dispersed areas on the Tahoe National Forest. The permittee agrees to the following terms:
2. Clear all flammable material away from the fire for a minimum of five feet in all directions to prevent escape of the fire.
3. Have a shovel available at the campfire site for preparing and extinguishing campfires.
4. Have a responsible person in attendance at all times.
5. Extinguish campfire with water, using the drown, stir, and fell method.

FIRE RESTRICTIONS

1. It is not uncommon for the Tahoe National Forest to impose fire restrictions during the summer and fall months when high fire danger conditions exist. During such times, the use of campfires, barbeques, fireworks, smoking, welding, blasting and internal combustion engines is prohibited.

BURN BARRELS

1. Effective January 1, 2004, it is illegal to burn trash in dooryard incinerators. The burning of paper, cardboard etc. is also prohibited. Only the burning of dry vegetative materials is allowed with valid permit (LE-62) and compliance with conditions therein. (PRC 4421, 4422, 4423, 4425) (CCR title 17 sec.93113)

PERMITS FOR BURNING

1. A person shall not burn any brush, stumps, logs, fallen timber, fallows, slash, grass, forest or other flammable material in any area receiving fire protection by the department or upon federal lands administered by the United States Department of Agriculture or Department of the Interior, unless he has a written permit from the department or its duly authorized representative or the authorized federal officer on federal lands administered by the United States Department of Agriculture or Interior and in strict accordance with the terms of the permit. (PRC 4423)

SPARK ARRESTERS

A spark arrester is a device constructed of nonflammable materials specifically for the purpose of removing and retaining carbon and other flammable particles over 0.0232 of an inch in size from the exhaust flow of an internal combustion engine that uses hydrocarbon fuels or which is qualified and rated by the United States Forest Service. (PRC 4442)

1. Except as otherwise provided in this section, no person shall use, operate, or allow to be used or operated, any internal combustion engine which uses hydrocarbon fuels on any forest-covered land, brush-covered land, or grass-covered land unless the engine is equipped with a spark arrester maintained in effective working order. Spark arresters affixed to the exhaust system of engines shall not be placed or mounted in such a manner as to allow flames or heat from the exhaust system to ignite any flammable material.
2. Engines used to provide motive power for trucks, truck tractors, buses and passenger vehicles, except motorcycles, are not subject to this section if the exhaust system is equipped with a muffler as defined in the Vehicle Code.
3. Turbocharged engines are not subject to this section if all exhausted gases pass through the rotating turbine wheel, there is no exhaust bypass to the atmosphere, and the turbocharger is in effective mechanical condition.

Section 2

EQUIPMENT

During any time of the year when burning permits are required in an area, no person shall use or operate any stationary equipment such as amotor, engine boiler, welding equipment, cutting torch, tar pot or grinding device which is located on or near any forest, brush or grass covered land, without doing both of the following:

1. Cleaning away all flammable material, including snags, around such operation for 10 feet.
2. Maintain one serviceable round point shovel and one backpack pump water type fire extinguisher ready to use at the immediate area during the operation.
3. No person, except any member of an emergency crew or publicly or privately owned utility service vehicle, shall use or operate any vehicle, machine, tool or equipment

powered by an engine operated on hydrocarbon fuels in any industrial operation located on or near any forest, brush or grass covered land between April 1 and December 1 of any year, or at any other time when ground litter and vegetation will sustain combustion, without providing, for fire fighting purpose only, tools prescribed in this section.

4. On any such operation a sealed box of tools shall be located at a point accessible in the event of fire. This toolbox shall contain: one backpack pump type fire extinguisher, two axes, two McLeod fire tools and a sufficient number of shovels so that each employee can be equipped to fight fire.
5. One or more chain saws of three and one-half horsepower with a cutting bar 20 inches in length or longer shall be immediately available within the operating area, or a full set of timber falling tools shall be located in the fire toolbox.
6. Each rail speeder and passenger vehicle shall be equipped with one shovel and one ax, and any other vehicle shall be equipped with one shovel. Each tractor shall be equipped with one shovel. (PRC 4428)
7. During any time of year when burn permits are required, a person shall not use or operate any steam-operated engine, machine equipment, mill or industrial plant located on or near forest or brush covered land, without providing one adequate force or water under pressure equivalent to a pump, and not less than 200 feet of hose not less than one inch in diameter for each steam-operated engine or equipment. The pump or water pressure shall be capable of applying a minimum of 40 pounds pressure at the nozzle on 200 feet of hose, nozzle to be one-fourth inch or larger in diameter. If two steam-operated engines or equipment are operated within 100 feet of each other, only one engine or equipment need to be equipped. (PRC 4430)
8. During any time of the year when burning permits are required, no person shall use or operate or cause to be operated any portable tool powered by a gasoline engine on or near any forest, brush, or grass covered land, within 25 feet from any flammable material, without providing at the immediate locations one round point shovel or one fire extinguisher. The Forest Service shall specify the type and size of fire extinguisher necessary. The required fire tools shall at no time be farther than 25 feet from the operation. (PRC 4431)

Section 3

Structure Fire Hazard Reduction and Equipment

Any person that owns, leases, controls, operates or maintains any building or structure in, upon or adjoining any mountainous forested, brush covered lands, or any land covered with flammable material, shall do all the following:

1. Maintain around and adjacent to building or structures a fuel break for a distance of not less than 30 feet on each side or to the property line, whichever is nearer.This does not apply to single trees, ornamental shrubbery or similar plants which are used as ground cover, if they do not form a means of rapidly transmitting fire from the native growth to any building or structure.
2. Maintain around and adjacent to any building or structure additional fire protection or firebreak which is located from 30 feet to 100 feet from such building or structure or to the property line, whichever is nearer, as may be required by the Director, or designated official, because of extra hazardous conditions. Grass and other vegetation located more

than 30 feet from such building or structure and less than 18 inches in height above the ground may be maintained where necessary to stabilize the soil and prevent erosion.

3. Remove that portion of any tree which extends within 10 feet of the outlet of any chimney or stovepipe.
4. Maintain any tree adjacent to or overhanging any building free of dead or dying wood.
5. Maintain the roof of any structure free of leaves, needles or other dead vegetative growth.
6. Provide and maintain at all times a screen over the outlet of every chimney or stovepipe. The screen shall be constructed of nonflammable material with openings of not more than one-half inch in size. (PRC 4291)

Section 4

POWERLINE RIGHTS-OF-WAY

- Any person that owns, controls, operates or maintains any electrical transmission or distribution line on any mountainous, forested, or brush or grass covered land shall maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightning arrester, line junction or dead end or corner pole, a firebreak which consists of a clearing of not less than less 10 feet in each direction from the outer circumference of such pole or tower. (PRC 4292)
- Any person that owns, controls, operates or maintains any electrical transmission or distribution line upon any mountainous, forested, or brush or grass covered land shall , during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for the fire protection of such areas, maintain a clearance of the respective distances which are specified in this section in all directions between all vegetation and all corridors which are carrying electric current:

(a) For any line which is operating at 2,400 or more volts, but less than 72,000, four feet.
(b) For any line which is operating at 72,000 or more volts, four feet.
(c) For any line which is operating at 110,000 or more volts, 10 feet. (PRC 4293)

Appendix A
Mitigation Measures

These mitigation measures an attachment to, and part of the terms and conditions in the Conditions of Approval for the Plan of Operations for these mining claims.

Existing Operation Area:
To reduce erosion and sediment delivery to streams, to maintain the road surface, and to accelerate reclamation that will in turn reduce sediment delivery to streams and improve visual impacts where reasonably feasible:

a) Maintain drainage away from waste areas, particularly 1, 2 and 3, as approved in previous Plans of Operation.

b) Maintain drainage on roads (see erosion control measures, below)

New Access Road:
There is no toe on which fill may be caught on the slope; to mitigate probable adverse environmental impacts related to erosion and sediment delivery and visual impacts:

c) The road will be constructed to minimize down slope migration of material and to facilitate future reclamation.

d) The geometry of the cut and fill slope is dependent upon the slope of the existing hill. The proposed road shall be built to not exceed a width of 10 feet, including berm.

4.a. On slopes less than 75% the fill slope length shall not exceed the 60 running feet from the outer edge of the road. When it appears that the 60 foot slope distance may be exceeded, as determined by the Forest Service, the toe of the slope shall be keyed in. Key in is a term to describe a feature to catch material from further down hill travel, such as a level benched surface (such as a lip of a road) or a retaining structures installed at the toe of the fill slope to the fill slope beginning.

4.a.1) Another measure that may be useful to the Forest Service engineer is when the angle of repose is 35-40 degrees, or between 70 and 83 percent. The blocky rock material shall appear to be interacting (interlocking) with itself. If there is soil in the fill, the soil shall fill in the voids between the rock. If the soil appears to interfere with the blocky rock interlock then the toe of the slope shall be keyed in. This is both a function of the size of blocky material and the quantity of soil.

4.b. Slopes that exceed 75% shall be full bench construction or small retaining structures shall be installed at the toe of the fill slope to stop the uncontrolled downhill travel of material, prior to the fill slope beginning.

e) If retaining structures are used to key in the toe of the slope they shall be made up of a Forest Service approved retaining structure such as gabion baskets wired together (approximate size of 3 ft x 3 ft x 9 ft) with a benched ground base so the gabion baskets are on a perfectly level, well-compacted surface. Gabion Baskets shall be properly

constructed and inspected by a Forest Service engineer prior to, during, and following placement, as shall the placement site.

6. All locations along the proposed access road where there is the potential of concentrated water flow, the road shall be reinforced with an armored dip, or a culvert shall be installed to convey the water. There is one small ephemeral drainage in bedrock about 1/3 way from the beginning of the new road where an armored dip would work; soil must be kept out of the drain.

7. There is an area at the beginning of the road that has been requested as a disposal site at the 'bone yard' or parking area. The area would have to be built up to meet the grade of the proposed road, so this is an appropriate location for the mine to temporarily dispose of mine waste, using the current spur roadbed as a toe bench area for the beginning of the new road. Waste material shall be completely caught on this toe throughout the project.

8. The claimant/operator shall monitor the road for settling. If settling is occurring, the claimant shall notify the Forest Service so a determination can be made as to why the road is settling and if any actions need to be taken.

9. A Forest Service Engineer certified in Road Construction shall certify all construction aspects of the road.

10. Lop and scatter slash, on the contour, so it does not exceed 12 inches in height from the ground over bare areas containing soil. In lieu of lop and scatter slash could be removed, chipped, or hand piled and burnt (with appropriate permits) generated from road construction.

11. Retain all of the vegetation for this low standard road in place, only removing the vegetation in the road bed location.

Waste Dump 5:

To mitigate movement of soil from the waste dump to any stream, failure of the waste dump, and to protect surface resources:

12. Heavy brush shall be cleared as the area is filled. Light brush may remain to be buried in the fill, as some of it may sprout back through the mine waste along the edges.

13. To gain capacity and life expectancy of the waste area, properly install engineered gabion baskets on the down slope end of the ravine to catch the waste rock at the Forest Service designated place. The claimant shall calculate the final amount of the material to be placed in the waste area, and from this measurement the height of the gabion shall be agreed to. The gabion base shall then be prepared for that height before installation of the first gabion course. The base must be level prior to gabion installation. The first course shall be keyed in. Gabion baskets shall be filled with coarse material so as to allow for drainage and reduce pore pressure build up. Backfill in front of the gabion wall with coarser material for drainage. A certified Forest Service Road Construction Engineer or GeoTechnical Engineer shall certify the installation and construction of the gabions.

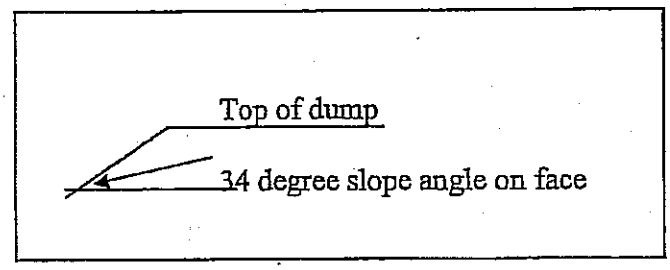
14. If gabion baskets are not used, or until such time that the operator chooses to use gabion baskets or another Forest Service approved method of increasing capacity, waste material, including fines and sediments, shall not pass the beginning of the flat area prior to the drop off into the ravine downstream of the waste dump as designated on the ground by the Forest Service.

15. Prevent movement of fine material (soil, sediment) down channel in the waste dump by installing and maintaining an approved erosion barrier. Material trapped in the barrier shall be cleaned out periodically, in September and mid season and as necessary (after heavy rainfall). Accumulated material shall be placed where it will not travel down channel.

[redacted]Keep fines away from gabions. A filter cloth could be used, and would help to tie in the mass of gabion structure.

17. Regardless if gabion baskets are used, the face of the disposal area must have a slope no greater than 1 ½:1 (H: V) for the entire length of the waste site where waste material is dumped to the top of dump as shown below. The surface of the waste dump shall not ever exceed a 34 degree slope angle on the face. (see figure A.)

Figure A



18. Armor the face of the waste dump with coarse rock to control erosion during periods of inactivity, and when the dump is full.

19. If a gabion toe key structure or other type of retaining structure is not used the claimant must provide the authorizing official with a supplement to the plan of operation stating how the waste material will stay on the upper end of the waste dump (above the toe on the flat bedrock area) and will not spill over into the down slope steeper area. In addition the claimant shall provide information pertaining to waste dump plans for the future.

20. Initially end-dump material from the end of the road. When it is safe to do so, ramp the road down into the waste dump, compact and shape the material, and continue to dump, from the bottom of the dump towards the upper end and the road. When or if possible, the disposal area shall fill from the toe up. If ramping down, compacting, etc. is not done; the claimant shall provide the authorizing official with a supplement to the plan of operations regarding waste dump stability and capacity.

21. These mitigation measures are based on the waste material being of a blocky rock nature. If the material being dumped changes from the blocky rock, further environmental analysis will be done, and the plan of operations may be modified as per 36 CFR 228.

Existing Portal Area, Existing Road, New Road and Waste Area:

22. On exposed surfaces containing soil, erosion control measure shall be taken, such as placing leaf litter, slash, placing erosion control materials such as blankets or waddles, or mulching with weed seed free materials. For erosion control measures to be effective, proper installation is essential.

23. The following erosion control measures shall be implemented to prevent sediment generated by mining and related operations from entering watercourses.

a) Erosion control measures shall to be in place and kept current after September 15th or before to predicted rain events prior to September 15, and also immediately prior to seasonal shut down. Erosion control work shall be inspected periodically to monitor effectiveness and this shall be done on a weekly basis when storms occur and/or are predicted. Road surfaces, fill and cut slopes, dumps, and process areas shall be inspected for signs of rilling, areas of sediment deposition, and sediment delivery to the nearest drainage channel.

The kinds and intensity of erosion control work required of the mine operator will be adjusted to ground and weather conditions with emphasis on the need to control overland runoff, erosion and sedimentation.

A Storm Water Pollution Prevention Plan (NPDES Storm Water Pollution Prevention Plan) may be required through the Central Valley Regional Water Quality Control Board.

b) Revegetation shall occur as promptly as possible to establish ground cover; see the reclamation plan.

c) Erosion control measures on roads shall be rolling grade dips built into the roadway every 100 feet, or where require by the Forest Service, and at ephemeral drainage crossings, or other agreed to water spreading devices. These measures shall comply with Timber Sale Administration Handbook (FSH 2409.15 Secs. 61.64 and 61.65), which provide guidelines for spacing cross drains, construction techniques, and cross drain angles and heights.

d) In areas where the outlet of the rolling grade dips or water spreading devices drain onto bare soil and/or areas where gullying and/or rilling 2 or more inches deep could occur energy dissipaters shall be employed to stop sediment or erosion from traveling further than 20 feet from the end of the outlet. Examples of energy dissipaters are properly installed mats, waddles, or slash. Filter material may include properly installed rip-rap, certified weed seed free straw bales, slash, or wood chips certified weed seed free waddles.

e) The mine operator shall monitor effectiveness of erosion control measures and provide timely maintenance to ensure erosion control structure stability for the life of the operations, and for up to one full wet season following the completion of mining activity. If the operator fails to do effective maintenance work, the Forest Service may assume the responsibility and charge the mine operator accordingly.

f) Road construction activities shall be conducted during minimal runoff periods. Equipment shall not be operated when ground conditions are such that erosion and sediment yield would result. Erosion control work will be kept as current as practicable with ongoing operations.

g) Where roads intercept subsurface flow it is necessary to provide subsurface drainage to prevent saturation and subsequent slope failure by one of the following methods:

- ❖ Pipe under drains
- ❖ Horizontal drains
- ❖ Stabilization trenches

Water should be dispersed below these drains to vegetated areas capable of withstanding increased flows using energy dissipaters as necessary to prevent erosion.

h) Fill slopes and waste dumps will be constructed only of inorganic material. Fills within RCA's will require layer placement with roller compaction, stepped 1-foot layer placement and compaction by Method 2, Forest Service Standard Specifications (1985) and will be stabilized per BMP's 2.2 and 2.4 (of the EA).

i) Use of all roads would be restricted to periods when roads are stable or during winter season when road surfaces can support vehicular traffic without rutting of the road surface. Rutting is characterized by vehicle or machinery depressions at least 2 inches in depth and 20 feet long and affecting 10 percent or more any given mile of road.

Big Seam and Red Ink Maid Mining Claims

Reclamation Plan
For
Existing Portal Area, Existing Access Road, and New road to Waste Dump #5, and Waste Dump #5

The end use is defined in the TNF LRMP; the reclamation plan would be consistent with the end use and to meet requirements for environmental protection. Considerations would be given the Tahoe LRMP (management area) and the Sierra Nevada Framework Plan Amendment (SNFPA, 2004).

This reclamation plan takes into consideration the EA, Decision, and appendices.

Based on current and proposed operations, reclamation end results include these objectives:

- revegetation of the impacted areas, where soil exists, with native plants in a timely manner (as soon as disturbance has occurred and planting or seeding is likely to be successful).
- prevent and/or minimize erosion on the operating area.
- prevent instability to the existing portal area and access road, and the new road and new waste dump.
- at the conclusion of operations to return the area to as near to natural as possible and provide for short and long term stability.
- public safety.
- eliminate or minimize hazardous substance contamination from items such as fuels, or acid rock drainage.
- maintenance and monitoring until performance standards are met.

To guide achievement of the end result the following measures have been designed for the site with performance elements to protect the environment:

1. Salvage topsoil from the road location and from the waste dump, where it exists, and when it is safe to do so, and stockpile in areas agreed to by the Forest Service. Use this stockpiled soil and leaf litter (etc) on the new road cut and fill slope to aid in moisture holding capacity and establishing vegetation which will minimize surface erosion in the long term, and help meet visual quality objectives. Mulch areas where stockpiled soil is not available with weed seed free materials prior to September 15 of each year, unless otherwise agreed to in writing.

2. Survey the existing vegetation to determine native species that are adapted to the site. Reestablish native species that are adapted to the site, in a timely manner, when soil is moist and scarified, for success of seeding or planting. The soil would need to be moist all the way through for planting of vegetation, and moist in the top 6 inches for seeding. Collecting seed from the on-site native species when seed is mature and ripe and scattering under the conditions described above, on soil, on disturbed areas, would be an economical way to start reestablishing native adapted species. On an annual basis the claimant shall meet with the Forest Service, in advance of seed gathering, seed dispersal, or vegetation planting to discuss timing and density distribution. The claimant shall intentionally plant and/or seed all freshly bared soils at optimal times during the year. Weed seed free mulch will be required, and shall be applied prior to summer soil drying times, and prior to winter rainfall (September 15).

3. Erosion will be determined through monitoring by the claimant and Forest Service. Soil movement is identified as deposits that form fans, sediment or litter pools, pedestals, accumulations of debris or soil on the uphill side of plants or slash; rills or gullies; newly exposed roots; or landslides. Additional effective erosion control measures would need to be immediately undertaken to minimize the above conditions.

4. Treat areas where 2 inch deep rills occur to prevent sediment travel further than 20 feet from the source (TNF LRMP). Erosion control measures would include effective scatter of slash (slash in contact with the ground to trap sediment), placing leaf litter; mulching; or scatter of weed seed free straw; or proper installation of waddles, erosion blankets, or weed seed free straw bales depending on the severity of the erosion. Effective erosion control may also include or consist of re-grading, installation and/or the movement of existing water bars. This shall continue until stabilization has occurred for three year sor more.

5. When the road to waste dump 5 is no longer needed, put the cut and fill back to slope and vegetate as described above.

6. Outslope and rip the primary access road and landing area outside the portal to provide drainage and slope stability at the termination of operations.

7. During periods of inactivity (1 or more months), particularly in the rainy season, and after the waste dump is full, build an armored channel across the surface and down the face of the fill to not exceed 34 degrees in angle. The blocky material from the mine should be adequate material for the armored channel. Where there is soil on or in the waste dump it shall be revegetated and mulched as described above, unless other wise agreed to in writing.

8. Monitor the waste dump 5 to determine if water is flowing off of, or from along side of Mosquito Ridge (96) road in the waste area. Should there be overland flow from the 96 road, it would need to be diverted, or other resolution sought so as to not jeopardize the stability of the waste It may be possible to divert water coming from the ravine above the Mosquito Ridge road to a culvert and ditch to the west, just below Mosquito Ridge Road. To properly divert the water, the existing shallow ditch just below Mosquito Ridge Road will have to be cleaned out and deepened to help divert water away from the disposal area and to adjacent natural drainage to the west. It will also have to be regularly maintained by the claimant to ensure that water is being diverted properly.

9. The claimant shall monitor the roads and all waste dumps for settling. If settling is occurring, the claimant shall notify the Forest Service so a determination can be made as to why the settling is occurring and if any actions need to be taken.

10. Retain all the vegetation for the new low standard road in place, only removing the vegetation that is in the road location.

11. Effectively seal adits and portals to prevent entry by the public. Closure devices would be discussed prior to the termination of the operation, but as a minimum must be locked and leave a minimum 6 inch air space on the top of closure if the Forest Service determines that adits provide habitat for bats, a bat friendly gate shall be required.

12. Permanently close the main access road at the junction of the Mosquito Ridge road with an impassable earthen barrier at the termination of operations.

13. Remove all facilities, equipment, and materials from National Forest lands.

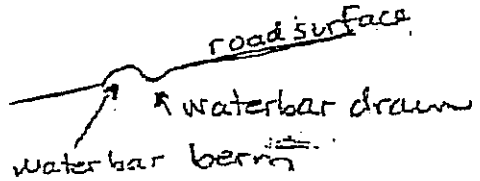
Erosion Control and Prevention on National Forest Lands

The attached erosion control and prevention information came from the Timber Sale Administration Handbook, and are applicable to, and will be used on, other land uses such as mining or clearing.

Since the terminology for Timber Sales is different than that of other land uses, use the following guide to understand how these standards apply to your operation.

- A landing is any flat area such as an equipment pad, portal area, or parking area.
- Skid trails and fire lines could be any linear feature such as a driveway, or access road.
- A SA/HI is an administrator of an authorization equivalent to a Special Use Administrator or Minerals Officer.
- The TSC is the timber sale contract which is, for these purposes, equivalent to a Special Use or Mining authorization.
- Usually the Forest Service will designate the location of erosion control or prevention structures. However, if the permittee or operator sees that erosion control or prevention structures are necessary they shall install the structure as per the attached standards.
- The Forest Service has the authority to change the spacing of structures to other than those in Table 1.
- Structure maintenance is a key component to success.

The following diagrams may help provide you additional information to successfully install effecive erosion control or prevention structures.



to be effective the berm & drainage need to span the entire road width. Neither berm nor drain need to be deeper or higher than 3 or 4 inches, if it is a constant depth/height. Drain width should be a minimum of 4 inches. The berm needs to be compact.

Appendix A

Best Management Practices for the Big Seam - Red Ink Maid Mines

These Best Management Practices are an attachment to, and part of the terms and conditions in the Conditions of Approval for the Plan of Operations for these mining claims.

Mining and associated road building has long been recognized as sources of non-point water quality pollution. Non-point pollution is not, by definition, controllable through conventional water treatment plant methods. Non-point pollution is controlled by containing the pollutant at its source, precluding delivery to surface water. Sections 208 and 319 of the Federal Clean Water Act, as amended, acknowledge land treatment measures as being an effective means of controlling non-point sources of water pollution and emphasizes their development.

Working cooperatively with the California State Water Quality Control Board, the Forest Service developed pollution control measures, referred to as Best Management Practices (BMPs), that are applicable to National Forest System (NFS) lands. The BMPs were evaluated by State Water Quality Control personnel as they were applied on site during management activities. After assessment of the monitoring data and completion of public workshops and hearings, the Forest Service's BMPs were certified by the State and approved by EPA as the most effective means to control non-point source pollution.

The land treatment measures incorporated into Forest Service BMPs evolved through research and development measures, and have been monitored and modified over several decades with the expressed purpose of improving the measures and making them more effective. On site evaluations of the control measures by State regulatory agencies found the practices were effective in protecting beneficial uses and were certifiable for Forest Service application as their means to protect water quality. The Clean Water Act provided the initial test of effectiveness of the Forest Service non-point pollution control measures by requiring evaluation of the practices by regulatory agencies (State Board and EPA) and the certification and approval of the practices as the "BEST" measures for control.

BMPs are designed to accommodate site-specific conditions. They are tailor-made to account for the complexity and physical and biological variability of the natural environment. In the 1981 Management Agency Agreement between the State Water Resources Control Board and the Forest Service the State agreed that: "The practices and procedures set forth in the Forest Service document constitute sound water quality management and, as such, are the best management practices to be implemented for water quality protection and improvement on NFS lands." Further the Water Quality Control Plan for the Central Valley Regional Water Quality Control Board states "Implementation of the BMPs, in conjunction with monitoring and performance review requirements approved by the State and Regional Boards, is the primary method of meeting the Basin Plan's water quality objectives for the activities to which the BMPs apply."

Implementation and effectiveness of BMPs are evaluated following the Region 5 BMP Evaluation Program guidelines. Results of this monitoring as well as the results from other projects on the Tahoe National Forest and throughout the Region are used to fine tune BMPs including the Cumulative Water Effects (CWE) analysis.

Water quality should not be adversely impacted if current management direction along with the BMPs specified below are implemented. When these practices have been adhered to in the past they have been effective in maintaining water quality. Similar BMPs have been effective in protecting beneficial uses affected by previous mining operations on the west side of the Tahoe National Forest. The practices specified herein are expected to be fully effective in maintaining the identified beneficial uses.

BEST MANAGEMENT PRACTICES

1.1 LOCATABLE MINERALS PLAN OF OPERATIONS REVIEW PROCESS

An Interdisciplinary Team (IDT) composed of a hydrologist, soil scientist, wildlife biologist, geo-technical engineer, minerals examiner geologist, transportation planner, and others, have identified potential water quality problems and provided administrative controls, corrective treatments, and preventative measures. They identified specific mitigation measures for these areas as documented in the following BMPs and in the NEPA document to become the conditions of approval for the Plan of Operations. The IDT has made evaluations of watershed responses to proposed site clearing, road construction; mine waste disposal sites, the mine Reclamation Plan, and mine facilities. The mine Reclamation Plan is reviewed to ensure the site is returned to a stable, non-erosive landscape reclaimed to the designated end use as per the Tahoe National Forest Land and Resource Management Plan (TNF LRMP).

1.2 MINE SITE DESIGN

The mine site design should be such that it secures favorable conditions of water flow and water quality by conforming to Forest Service guidelines, National Forest Management Act (NFMA) requirements, and the 36 CFR 228(a) regulations. Hydrologic survey is conducted to assess the impact of mining operations on streamflow and water quality. Location of mining related hydrologic contact points such as the mine waste material stockpiles, water diversions, and point source discharges are identified with relation to the water resource. This will include stream channel and aquatic habitat that may be affected by disruption in flow or changes in water quality caused by mining operations. (Hydrologist together with the Minerals Officer during scoping process)

1.4 USE OF PLAN OF OPERATIONS MAPS FOR DESIGNATING WATER QUALITY PROTECTION NEEDS

A mining site map would be developed during the planning process in accordance with 36 CFR 228.4. It identifies streamcourses, springs and meadows to protect, as well as operating area

boundaries, specified roads, road use restrictions, structural improvements to protect, water sources available for mine operators use, and other relevant features required for the Conditions of Approval for the Plan of Operations. BMPs would be used for the entire area. (Minerals Officer during Plan of Operations Approval Process).

1.5 WET WEATHER MINING OPERATIONS

Should ruts in the road exceed 2 inch in depth for a distance of 10% of the total road surface, the TNF wet weather plan must be implemented. A wet/winter operation agreement should be in place prior to operating during wet weather.

1.8 RIPARIAN CONSERVATION AREA DESIGNATION

Management in Riparian Conservation Areas (RCAs) needs to be consistent with Riparian Conservation Objectives (RCOs) and Aquatic Management Strategy (AMS) goals of the Sierra Nevada Forest Plan Amendment (2001 and 2004). The intent of management direction for RCAs is to (1) preserve, enhance, and restore habitat for riparian- and aquatic-dependent species; (2) ensure that water quality is maintained or restored; (3) enhance habitat conservation for species associated with the transition zone between upslope and riparian areas; and (4) provide greater connectivity within the watershed. Projects that propose activities in RCAs need to enhance or maintain the physical and biological characteristics of the RCA.

This mining claim is in a RCA, therefore the goals and objectives in the Sierra Nevada Forest Plan Amendment shall be met in as much as possible given the existing condition.
Mine waste dumps are required to be located outside of riparian conservation areas. Where no reasonable alternative to locating these mine waste facilities in riparian conservation areas exists, locate and design them with the goal of ensuring mine waste facility stability and preventing potentially toxic releases. The following measures are to be applied:

1. Analyze mine waste material using the best conventional sampling methods and analytical techniques to determine its chemical and physical stability characteristics.
2. Locate and design mine waste facilities using conventional techniques to ensure mass stability and prevent acid or toxic material releases.
3. Ensure the Reclamation Plan and the reclamation bonds are sufficient to ensure long-term chemical and physical stability of mine waste facilities.
4. Monitor mine waste facilities after operations have ceased to ensure that chemical and physical conditions are consistent with framework aquatic management strategy goals.

Note: the site is within the inner gorge. If an inner gorge is present, then the distance will extend to the slope break between the upland and the inner gorge. Inner gorges are defined as stream adjacent slopes steeper than 65%. If other channels are found during unit layout or harvest, the hydrologist will be contacted to assign a designation and RCA width for the channel.

1.12 MINE FACILITIES AND WASTE ROCK DISPOAL SITE LOCATIONS

The objective of this BMP is to locate mine facilities in such a way as to avoid watershed impacts and associated water quality degradation. Mining facility and disposal locations are

located to avoid wetlands, unstable lands, and RCA's. The cleared or excavated size of facilities and disposal sites shall not exceed that needed for safe and efficient equipment operations. Sites would be selected which involve the least excavation and soil erosion potential. Where possible, sites would be located on or near ridges and where equipment operation across drainages is minimized. They would be located where sidecast will neither enter drainages nor damage other sensitive areas. Any deviation from this BMP shall be agreed to by the Forest Service in advance.

1.13 EROSION PREVENTION AND CONTROL MEASURES DURING MINING Operations

The objective of this BMP is to ensure that mine operations will be conducted reasonably to minimize soil erosion. Erosion control measures need to be kept current after September 15th. Erosion control work should be inspected periodically to monitor effectiveness and this should be done on a weekly basis when storms occur and/or are predicted. Road surfaces, fill and cut slopes, dumps, and process areas should be inspected for signs of rilling, areas of sediment deposition, and sediment delivery to the nearest drainage channel.

The kinds and intensity of erosion control work required of the mine operator would be adjusted to ground and weather conditions with emphasis on the need to control overland runoff, erosion and sedimentation. The provision also requires that erosion control work be completed as promptly as possible after September 15 or as provided for in the Plan of Operations Conditions of Approval.

A Storm Water Pollution Prevention Plan (NPDES Storm Water Pollution Prevention Plan) may be required through the Central Valley Regional Water Quality Control Board.

1.14 SPECIAL EROSION PREVENTION MEASURES ON DISTURBED LAND

To provide appropriate erosion and sedimentation protection for disturbed areas, the operator shall seed, spread slash or mulch on roads, road cut banks and fill slopes, facility areas and fill slopes, and waste dumps. In addition, these areas shall be planted with native species where soil exists.

1.15 REVEGATION OF AREAS DISTURBED BY MINING ACTIVITIES

Revegetation is required where soil has been disturbed by the mining operation to control erosion. The mine operator will be required to take appropriate measures to establish an adequate ground cover of grass or other vegetative stabilization measures acceptable to the Forest Service. Seed would be obtained from the same general region as the mine. Seed would be collected on site or purchased from a commercial supplier who can certify that the seed was collected in the project area. Seed for this mining claim would be obtained from the canyon live oak plant community within two miles of the site at a similar elevation and from a similar substrate.

1.16 MINE FACILITY PAD EROSION PREVENTION AND CONTROL

The Plan of Operations Conditions of Approval shall provide for erosion prevention and control measures on all mine facility work pad areas including provisions for work surfaces to have proper drainage. At the completion of use, the work pad surfaces should be ripped or subsoiled to make provision for revegetation to permit the drainage and dispersion of water.

Other provisions may include scarifying, covering with organic growth media, topsoil or applying certified weed free straw mulch.

1.17 EROSION CONTROL ON ROADS

Erosion control measures on roads would be completed by the operator prior to September 15, predicted rain events prior to September 15, and also immediately prior to seasonal shut down. Cross-ditches, water spreading devices, or backblading shall be agreed to by the Minerals Officer. These measures shall comply with Timber Sale Administration Handbook (FSH 2409.15 Secs. 61.64 and 61.65), which provide guidelines for spacing cross drains, construction techniques, and cross drain angles and heights. In addition to the above, in areas where the outlet of the cross ditch drains onto bare soil and/or areas where gullying and/or rilling 2 or more inches deep could occur energy dissipaters shall be employed to stop sediment or erosion from traveling further than 20 feet from the end of the outlet. Examples of energy dissipaters are properly installed mats, waddles, or slash.

1.20 EROSION CONTROL STRUCTURE MAINTENANCE

Conditions in the approved Plan of Operations are required to ensure that constructed erosion control structures are stabilized and working. The mine operator shall provide maintenance to ensure erosion control structure stability for the life of the operations, and for up to one full wet season following the completion of mining activity. If the operator fails to do seasonal maintenance work, the Forest Service may assume the responsibility and charge the mine operator accordingly.

2.1 GENERAL GUIDELINES FOR LOCATION OF ROADS

The IDT included members from engineering, soil science, geology, hydrology, and minerals, who reviewed potential road locations to identify watershed concerns and locate roads to best meet the needs of the claimant and resource objectives. Approximately 640 feet of new haul road construction is planned for this project. The operator will retain all of the vegetation for this low standard road in place, only removing the vegetation in the roadbed location and the unstable large trees near the road's edge.

2.2 EROSION CONTROL PLAN

The operator shall submit a Plan of Operations, which includes erosion control measures. On exposed surfaces with fine soils, erosion control measure should be taken, such as mulching or placing erosion control blankets. For erosion control methods to work properly, proper installation is essential. Operations shall not begin until the Forest Service has given written approval of the Plan of Operations. Detailed mitigation measures have been developed by the

ID Team to be Conditions of Approval in the Plan of Operations. The intent of these mitigations is to prevent sediment generated by mining and related operations that generate sediment and erosion from entering watercourses.

2.3 TIMING OF CONSTRUCTION ACTIVITIES

Road construction activities shall be conducted during minimal runoff periods. Equipment shall not be operated when ground conditions are such that erosion and sediment yield would result. Such conditions are to be identified by the Minerals Officer with the assistance of a hydrologist, soil scientist, or other specialist as needed. Erosion control work will be kept as current as practicable with ongoing operations.

2.4 STABILIZATION OF WASTE ROCK DISPOSAL AREA SURFACES

To minimize erosion from exposed fill slopes on waste rock disposal areas, vegetative or mechanical measures would be required. Revegetation includes the seeding of native plant species, or the planting of brush and trees. Revegation may also include fertilizer, soil amendments and mulching. Mechanical measures may include, but not limited to, wattles, erosion nets, terraces, side drains, blankets, mats, rip-raping, mulch, tackifiers, and slash scatter on fill slopes.

2.5 ROAD STABILIZATION

The objective of this BMP is to reduce sedimentation by minimizing erosion from road slopes and slope failure along roads. This is an administrative and construction practice. There shall be adequate soils and geologic investigation to provide data necessary for proper cut and fill design, to ensure short and long-term road and road cut and fill stability.

2.6 DISPERSION OF SURFACE DRAINAGE FROM CUT AND FILL SLOPES

Where roads intercept subsurface flow it is necessary to provide subsurface drainage to prevent saturation and subsequent slope failure by one of the following methods:

a. Pipe under drains
b. Horizontal drains
c. Stabilization trenches

Water should be dispersed below these drains to vegetated areas capable of withstanding increased flows using energy dissipaters as necessary to prevent erosion. Engineering Representative (ER) - During road construction)

2.7 CONTROL OF ROAD DRAINAGE

All waterbars and/or cross drains will be spaced to allow adequate drainage off of road surfaces and minimize water flow down roads. Outlets will be rip-rapped if needed to dissipate water energy. The haul road shall be constructed as an outslope road. The outslope shall be 2-4% and shall have rolling grade dips built into the roadway every 100 feet or where require by the Forest Service and at ephemeral drainage crossings.

Any location along the proposed access road where there is the potential of concentrated flow, the road should be reinforced with an armored dip, or a culvert should be installed to convey the water.
There is a small ephemeral drainage in bedrock approximately 1/12 of a mile west of the beginning of the new disposal road that would require the installation of a culvert or will have to be reinforced with an armored dip creating a small ford.

All waterbars and/or dips will be spaced to allow adequate drainage off of road surfaces and minimize water flow down roads. Outlets will have energy dissipaters present. Should a road require drainage structures that will drain onto bare ground, a filter strip, not less than 20 feet in length (unless approved by the hydrologist) would be left below the road or where erosion would occur. Filter material may include properly installed rip-rap, certified weed seed free straw bales, slash, or wood chips certified weed seed free waddles.

2.9 TIMELY EROSION CONTROL MEASURES ON INCOMPLETE ROADS AND STREAM CROSSING PROJECTS

Implement erosion control measures each season no later than September 15. If substantial rainfall is predicted (i.e. summer thunderstorms) these same erosion control measures shall be in place in advance of the event. The operator shall monitor effectiveness and make necessary improvements in a timely manner. These could include diversion dams, cross drains, berms, or other facilities needed to control erosion.

2.10 CONSTRUCTION OF STABLE EMBANKMENTS (FILLS)

Embankments within RCA's will be constructed only of inorganic material. Fills within RCA's will require layer placement with roller compaction, stepped 1-foot layer placement and compaction by Method 2, Forest Service Standard Specifications (1985) and will be stabilized per BMP's 2.2 and 2.4.

2.11 CONTROL OF SIDECAST MATERIALS

Unconsolidated materials including rocks and boulders that are cast over the side of the road shoulder can roll directly into streams, damage down slope vegetation and create bare areas that are difficult to stabilize. Where side cast materials do not directly reach a stream, there is still highly susceptibility to erosion, dry ravel and mass instability, and subsequently can deliver sediment into a stream channel. Side casting is an unacceptable construction practice in areas where it can adversely impact water quality. Provisions for waste material disposal should be included in the Approved Plan of Operation.

2.12 SERVICING AND REFUELING OF EQUIPMENT

To prevent pollutants such as fuels, lubricants, and other harmful materials from being discharged into watercourses or into natural channels leading thereto, service and refueling areas shall be located outside of RCAs.

At a minimum it is recommended that the mine operator have absorbent socks and pillows with capacity to absorb the quantity of fuel, hydraulic fluid or lubricants stored on site, including

what is in the equipment fuel tanks and fluid reservoirs. In case of a hazmat spill, the material shall be immediately contained and the Forest Service shall be immediately notified. Regardless of quantity stored, fuel tanks, drums and buckets shall be stored in a secure location, with secondary containment. The operator shall provide a list that itemizes the type and quantity of each hazardous substance that is used and stored on-site. In addition the operator shall disclose how much hazardous waste is being generated and how the mine operator is disposing of it. Whenever there is a change in pollutant materials, including explosives, the operator shall notify the Forest Service in writing, of the materials used and stored on National Forest lands.

If the volume of all pollutant exceeds 660 gallons in a single container, or if the total storage at the site exceeds 1,320 gallons, a spill prevention containment and countermeasure plan shall be prepared. This plan will complement the Tahoe National Forest (TNF) "Oil and Hazardous Substances Pollution Contingency Plan".

The performance bond shall consider the cost of spill cleanup

2.22 MAINTENANCE OF ROADS

The road system shall be inspected prior to the operating season; problem areas will be identified and shall be corrected by the operator. The Forest Service and claimant will agree on an annual Road Maintenance plan. This BMP applies to all roads.

2.24 TRAFFIC CONTROL DURING WET PERIODS

Hauling on all native and aggregate surface roads would be restricted to the dry season when roads are stable or during winter season when road surfaces can support vehicular traffic without rutting of the road surface. Rutting is characterized by vehicle or machinery depressions at least 2 inches in depth and 20 feet long and affecting 10 percent or more any given mile of road. Refer to the Transportation Management Plan for the type of closure proposed for roads within the analysis area. A wet weather/winter operations agreement will be necessary for operations outside the Normal Operating Season listed in the Plan of Operations.

2.26 OBLITERATION OF TEMPORARY ROADS

Due to the absence of construction specifications and scheduled maintenance, temporary roads become chronic sediment sources. The NFMA requires that all temporary roads be returned to resource production within ten years after end of use. The mine operator will provide for dust abatement and erosion control during road use, and tillage to return the roadbed to production following use.

2.27 RESTORATION OF WASTE ROCK SLOPES

Waste rock slopes are susceptible to erosion due to steep side slopes and lack of vegetation. When required for site revegetation and prior to placement of the waste rock, topsoil will be removed and stockpiled for surface dressing in the reclamation period. Seeding, soil amendments and mulching may be required and can be carried on as referenced in Standard

Specification 625 (Forest Service Specifications for the Construction of Roads, EM7720-100, 1996) for seeding and mulching.

Salvage topsoil from the road location and waste dump and stockpile. Use this stockpiled soil and leaf litter (etc) on the new road cut and fill slope to aid in moisture holding capacity and establishing vegetation which will minimize surface erosion in the long term. Mulch areas where stockpiled soil is not available.

Survey the existing vegetation to determine native species that are adapted to the site. Reestablish native species that are adapted to the site. Collecting seed from the on-site native species and scattering under correct conditions, on soil, on disturbed areas would be an economical way to start reestablishing native adapted species.

3.1 WATER RESOURCE PROTECTION ON LOCATABLE MINERAL OPERATIONS

Federal Regulations (36CFR 228) promulgated under the Organic Act obligate both the mineral operator and the Forest Service to minimize adverse impacts to the surface resources of National Forest System administered land. It is the Forest Services objective to ensure that all mineral activities are conducted in an environmentally sound manner and that lands are reclaimed for other productive uses.

Since mining operations usually involve activities such as site clearance and road construction, other Best Management Practices should be implemented as warranted.

Several instruments will be used to control the impact on surface resources including water quality. It is seldom necessary to use all of those in every case. The seven instruments are: Notice of Intent to Operate, Plan of Operation, Environmental Document (NEPA), Reclamation Performance Bond, Special Use Permit, Road Use Permit, and Notice of Non-compliance.

A Plan of Operation (POO) is required from operators when mining activity is likely to cause significant disturbance of surface resources, including surface waters. A Plan must be approved prior to start of any work, which might result in significant disturbance to surface resources. The Conditions of Approval will incorporate the mitigation measures set forth in the environmental document.

Where mining operations have the potential to discharge waste into surface waters of the state, the operator is required by state law to file a Report of Waste Discharge with the Central Valley Regional Water Quality Control Board. When such a filing results in the issuance of a waste discharge permit to the operator by the Regional board; the discharge requirements of the permit become required provisions in the Plan of Operations for the mining activity, which is approved and administrated by the Forest Service. The Forest Service, acting within its designated water quality management agency capacity, serves as the State's agent in assuring the provisions are attained. Where no permit is issued but comments are provided, the Boards concerns may then be considered during the District Ranger's evaluation of the adequacy of the proposed project's water quality protection mitigation measures included in the Plan of Operations.

Mineral operations must comply with all Federal and State laws related to the Clean Water Act, the Comprehensive Environmental Response, Compensation and Liability Act, and the Resource Conservation and Recovery Act.

Environmental Document NEPA

The process required in NEPA and its implementing regulations (43CFR 1500-1508) must be followed to evaluate a Plan of Operation. The appropriate line officer will convene an ID Team to assess the impacts of a project on the environment, formulate alternatives, and prescribe mitigation measures. An EIS shall be prepared when projects have the potential to result in significant impacts to the environment. The environmental document will set fourth the mitigation measures for the proposed operation.

Notice of Non-Compliance

When an operator fails to comply with regulations or approved Plan of Operations requirements, and the non-compliance is causing loss of or damage to surface resources, the authorized Forest Service official shall issue the operator a "Notice of Non-compliance" It shall describe the non-compliance and specify the actions and time frames (generally not to exceed 30 days) for bringing the action into compliance. Administrative and legal remedies are available to the Forest Service through the Clean Water Act and to the State through the Porter Cologne Water Quality Control Act.

Performance Bond and Reclamation Plan

Prior to approval of the Plan of Operation, the operator may be required to furnish a financial guarantee to perform reclamation work. This will be in the form of an approved surety bond, cash or other security to cover the established cost of reclamation work. When a financial guarantee is required, the Plan of Operation and Reclamation Plan are not approved until the required finances are on deposit.

The Reclamation Plan should state the end use and the site should be reclaimed to be consistent with the end use. Considerations should be given the Tahoe LRMP and the Sierra Nevada Framework Plan Amendment (SNFPA).

The SNFPA ROD (2001, 2004) states under Forest wide S &Gs that mining Plans of Operation, Reclamation Plans/bonds address the cost of:

1. Removing facilities, equipment and materials
2. Isolating and neutralizing or removing toxic or potentially toxic materials
3. Salvaging and replacing topsoil

Upon exhaustion of the mineral deposit or at the earliest practicable time during operations, or within 1 year of the conclusion of operations, unless a longer time is allowed by the authorized officer, operator shall, where practicable, reclaim the surface disturbed in operations by taking such measures as will prevent or control onsite and off-site damage to the environment and forest surface resources including:

(1) Control of erosion and landslides;
(2) Control of water runoff;

(3) Isolation, removal or control of toxic materials;
(4) Reshaping and revegetation of disturbed areas, where reasonably practicable; and
(5) Rehabilitation of fisheries and wildlife habitat.
(6) Certification or other approval issued by State agencies or other Federal agencies of compliance with laws and regulations relating to mining operations will be accepted as compliance with similar or parallel requirements of these regulations.

3.5 CONTROL OF SANITATION FACILITIES ON MINING OCCUPANCY SITES

Toilet facilities will be planned, located, constructed, maintained, and inspected to minimize the possibly of water contamination. State and local health department and the Central Valley Regional Water Quality Control Board shall be contacted to coordinate all phases of sanitation management.

7.8 CUMULATIVE OFF-SITE WATERSHED EFFECTS

The objective of this BMP is to protect the identified beneficial uses of water from the combined effects of multiple management activities, which individually may not create unacceptable effects but collectively may result in degraded water quality conditions.

The cumulative off-site watershed effects (CWE) include all effects on beneficial uses that occur away from the sites of actual land use activities and which are transmitted through the drainage system. Effects can be either beneficial or adverse and result from the synergistic or additive effects of multiple management activities within a watershed.
(Hydrologist - During EA Process)